Geophysical Research Abstracts, Vol. 7, 07894, 2005 SRef-ID: 1607-7962/gra/EGU05-A-07894 © European Geosciences Union 2005



In Situ Plasma diagnostics With Thermal Noise Spectroscopy From IMAGE And WIND Spacecraft

K. Issautier (1), M. Moncuquet (1) and N. Meyer-Vernet (1) (1) Observatoire de Paris, LESIA, CNRS UMR 8109, Meudon, France (karine.issautier@obspm.fr/0033145077667)

Radio measurements can be used to obtain accurate remote sensing as well as in situ measurements in space plasmas. We analyse the power spectra measured by the Radio Plasma Imager (RPI) in the passive mode, using the 20-m long dipole antenna on IMAGE, during its passages through the Earth's plasmasphere. We also analyse the spectra obtained by the Thermal Noise Receiver (TNR) on WIND, during its crossing of the plasmasphere. Below the upper hybrid frequency, fUH, the spectra are weakly banded between gyroharmonics. From these frequencies, we obtain an independent measure of the magnetic field magnitude with a good accuracy. From fUH, the local electron temperature as well as the electron suprathermal temperature.